

REMARKS

Claims 1, 3-8, 10, 12-15, 17-19, 21-24, 26-42, 44, 45, 47-51 and 53-58 are pending in this application. No claims have been amended or canceled, and no new matter has been added. Claim 11 is allowed, and all of the other claims are rejected over the prior art.

The undersigned appreciates the courtesies extended by Examiners Nguyen and Amsbury in granting and conducting a telephone interview on November 25, 2003. During the interview, no agreement was reached on the patentability of any of the pending claims, but the Examiners indicated that the rejection would be reconsidered in response to the filing of this request for reconsideration. The substance of the interview is summarized below.

Brief Overview of the Asserted References

A. Mosher

U.S. Patent No. 5,799, 323 to Mosher, Jr. et al. ("Mosher") provides a system that includes one or more locally maintained databases, applications that modify the database(s), a transaction manager facility that maintains an audit trail of transactions processed by the applications against the database(s), and a plurality of remote parallel backup databases that receive commands from the transaction manager facility, based on the audit trail, to maintain "triple contingency protection" against catastrophic failures (Abstract). The transaction manager facility, also called a remote duplicate data facility (RDF), includes a portion that executes on a local computer system, and a portion that executes on a remote computer system (col. 4, lines 30-33). On the local computer system, an Extractor process extracts records from the audit trail (col. 4, lines 38-39). On the remote computer system, Receiver and Updater processes receive data from the Extractor process to keep the backup databases in synchronization with the local database (col. 4, lines 45-54). Mosher provides a methodology for keeping the remote databases in synchronization with each other in the event of a failure on the local database, whereby one of the remote databases is designated as a new "primary" system, and the other remote databases are designated as backups to the new primary system (col. 4, lines 55-67).

B. Kobayashi

U.S. Patent No. 6,148,415 to Kobayashi et al. ("Kobayashi") is directed to a switching control method for providing backup processing capacity (as opposed to backup *storage capacity*) for CPU fault tolerance or fail-over purposes (Abstract). Kobayashi discloses a technique whereby an operating processor is paired with a backup processor by means of an address (col. 5, lines 44-47). Upon the detection of a failure of an operating processor, a "synchronizing means" and "failure information storing means" on each processor control switching over from the operating processor to its corresponding backup processor (col. 1, lines 50-64). The disclosure of Kobayashi is not directed to storage systems, or the use of a domain that includes some computer systems and excludes others.

Rejections Under 35 U.S.C. §102(b)

Claims 26, 27, 30, 37, and 53-56 are rejected under 35 U.S.C. §102(b) as being anticipated by Mosher. The Applicants respectfully traverse this rejection.

A. Claims 26-29, 57-58

Claim 26 recites a method for use in a computer system having at least first and second backup storage systems to each store backup data for at least one client. The method comprises an act of receiving information related to backup activities of the second backup storage system at the first backup storage system.

The Office Action asserts that Mosher anticipates claim 26, with FIG. 2 of Mosher purportedly disclosing receiving information related to the backup activities of a second backup storage system at a first backup storage system. The Office Action contends (¶9) that "local primary computer 110 includes a local backup computer system 160" corresponding to a first backup storage system, that "remote computer system 122 also includes a remote backup system 162" corresponding to a second backup storage system, and that information which purportedly passes "between the local and the remote backup system" corresponds to information related to backup activities. This interpretation of FIG. 2, and Mosher overall, is unsupported by the reference.

As Applicants explained during the interview, FIG. 2 is a simple system diagram that depicts, *inter alia*, possible paths along which information may travel. FIG. 2 does not, however, disclose a receipt, at one backup storage system, of any information from another, and certainly does not disclose a receipt of information specifically related to the backup activities of the other backup storage system.

Mosher discloses that the information received at each of the backup storage systems in FIG. 2 is very limited, and Mosher provides no suggestion that this information includes information related to backup activities of the other backup storage system. For example, Mosher states that Extractor process 130 "only" sends checkpoint information 158 to the backup extractor process 150 (col. 7, lines 32-35). Similarly, Mosher states that during startup of the receiver process 132, checkpoint information 164 is sent to the backup receiver process 152 (col. 8, lines 26-29). No other disclosure is provided of the receipt of any other information at either of backup computer systems 160, 162, as the Office Action alleges, and certainly no specific disclosure of receiving information related to backup activities of another backup storage system. Indeed, an online word search of Mosher indicates that no reference to systems 160 or 162 is provided in the written description.

FIG. 2 shows nothing more than that the RDF Monitor process 140 communicates with both backup computer systems 160, 162. That does not mean that any information is shared between systems 160 and 162. As an analogy, a server implementing an online banking application may be coupled to two different user computers and communicate therewith, but it will not share private banking information between the users.

The fact that a certain result may occur in a prior art reference such as Mosher is not sufficient to establish the inherency of that result. M.P.E.P. 2112. To support a determination that an allegedly inherent result necessarily flows from the teachings of an asserted reference, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. Id. The Applicants respectfully assert that such a basis has not been provided.

While no agreement was reached on the anticipation of claim 26 by Mosher, the Examiners indicated that the rejection would be reconsidered upon the filing of this request for reconsideration.

For each of the reasons discussed above, Mosher does not anticipate claim 26. Accordingly, Applicants respectfully request the withdrawal of the rejection of claim 26 under 35 U.S.C. §102(b).

Claims 27-29 and 57-58 depend from claim 26 and are allowable for at least the same reasons.

B. Claims 30-36

Claim 30 recites a first backup storage system to store backup data from at least one first client, the first backup storage system for use in a computer system having a second backup storage system to store backup data from at least one second client. The first backup storage system comprises a first controller, coupled to the second backup storage system, to receive information related to backup activities of the second backup storage system.

As discussed above in connection with claim 26, Mosher does not disclose a first backup storage system that receives information related to backup activities of a second storage system. Accordingly, Applicants respectfully request withdrawal of the rejection of claim 30 under 35 U.S.C. §102(b).

Claims 31-36 depend from claim 30 and are allowable for at least the same reasons.

C. Claims 37-39

Claim 37 recites a computer readable medium encoded with a program for execution on a computer system that includes first and second backup storage systems coupled together, the first and second backup storage systems each storing backup data from at least one client. The program, when executed on the computer system, performs a method comprising an act of transferring information related to backup activities of the second backup storage system between the second backup storage system and first backup storage system.

As should be clear from the discussion above in connection with claim 26, Mosher does not teach or suggest transferring information related to the backup activities of a second backup

storage system to a first backup storage system. Thus, claim 37 patentably distinguishes over Mosher, and the Applicants respectfully request withdrawal of the rejection of claim 37 under 35 U.S.C. §102(b).

Claims 38 and 39 depend from claim 37 and are allowable for at least the same reasons.

D. Claims 53-55

Claim 53 recites a method for use in a computer system having at least one backup storage system to store backup data from at least one client. The method comprises acts of determining an occurrence of an event at which a report of information related to backup activities of the at least one backup storage system is to be generated; and automatically generating the report when it is determined that the event has occurred.

The Office Action asserts that Mosher discloses the limitations of claim 53 in passages at col. 6, lines 59-65 and col. 7, lines 1-3. Specifically, the Office Action asserts that Mosher discloses that the RDF Extractor process “read[s] the log files and send[s] the records,” and “is programmed to process automatically,” such that if a record describes a backup transaction, the record is a report of the transaction or event.

The Applicants respectfully assert that the cited passages do not disclose the limitations of claim 53 for at least two reasons. First, Mosher does not state that the RDF Extractor process “is programmed to process automatically”; Mosher states that the TMF 102 and Extractor 130 are programmed to progress automatically from one audit file to the next (col. 7, lines 1-3). In addition, Mosher provides no disclosure that upon progressing to a subsequent audit file, the Extractor process sends a record of a transaction. Thus, Mosher does not disclose determining the occurrence of an event at which a report of information related to backup activities is to be generated, and automatically generating the report when it is determined that the event has occurred, as recited in claim 53.

Second, even assuming for argument’s sake that Mosher discloses determining the occurrence of an event and automatically generating a report when it is determined that the event has occurred, this “report” does not include information related to backup activities of at least one backup storage system, as recited in claim 53. Rather, the cited passages describe information sent by the Extractor process, which executes on the local computer system, not a

backup system (col. 4, lines 38-39). Indeed, in the system of Mosher, any backup activities which may take place as a result of information sent by the Extractor process have not yet occurred when the information is sent, so a “report” of information sent by the Extractor process can not be related to backup activities of at least one backup storage system.

For each of the reasons discussed above, Applicants respectfully request withdrawal of the rejection of claim 53 under 35 U.S.C. §102(b).

Claims 54 and 55 depend from claim 53 and are allowable for at least the same reasons.

E. Claim 56

Claim 56 recites a method for use in a computer system having at least one backup storage system to store backup data from at least one client. The method provides information related to backup activities of the at least one backup storage system, the backup activities including the backing up of at least one work item associated with the at least one client. The method comprises an act of, when the at least one work item is backed up more than once in a given time period by the at least one backup storage system, providing only status of a most recent backup of the at least one work item.

The Office Action does not apply the disclosure of Mosher to the specific limitations of claim 56. In ¶9, the Office Action alleges that Mosher discloses providing a time stamp on individual audit records, and that "clearly, the time stamp is checked to determine the status of transaction [sic] when a backup transaction is performed." Even assuming that the Examiner's characterization of Mosher is accurate, the Office Action is unclear as to how the specific limitations of claim 56 are believed to be met by a disclosure that a timestamp is checked when a backup transaction is performed. Specifically, the Office Action provides no indication as to how the cited passages meet, for example, the claim limitation of providing only status of a most recent backup of at least one work item. Mosher does not disclose or suggest, in the cited passages or elsewhere, at least this limitation in claim 56. Accordingly, Applicants respectfully request withdrawal of the rejection of claim 56 under 35 U.S.C. §102(b).

Rejections Under 35 U.S.C. §103 (a)

Claims 1, 3-8, 10, 12-15, 17-19, 21-24, 28-29, 31-36, 38-42, 44-45, and 47-51 are rejected under 35 U.S.C. §103(a) as being unpatentable over Mosher in view of Kobayashi. The Applicants respectfully traverse this rejection.

I. The Purported Motivation for the Combination Is Not Supported by the References.

The Office Action asserts that it would have been obvious to one of skill in the art to apply the disclosure of Kobayashi to the disclosure of Mosher for three reasons. None of the alleged motivations for the combination are supported by the references.

First, the Office Action alleges that a skilled artisan would have been motivated to apply the disclosure of Kobayashi to Mosher, “because the teaching about the domain provides high benefits in access control between users and their backup system.” (Office Action, page 5). This assertion is entirely without support in Kobayashi, or elsewhere. The Office Action asserts that “[c]learly, Kobayashi teaches using a domain in backup operations” (Office Action, page 5), but this assertion is without citation to any portion of Kobayashi that purportedly supports it. Applicants’ representatives have performed an online word search of Kobayashi, and the word “domain” is not used once. It is entirely unclear what disclosure in Kobayashi is believed to teach a domain, let alone a domain that would clearly provide “high benefits and access control between users and their backup system.” The Applicants respectfully assert that the assertion that Kobayashi teaches a domain, and that the domain of Kobayashi would have motivated one of ordinary skill in the art to make any modification to Mosher, is entirely without support in the cited references.

Second, the Office Action contends that one of skill in the art would have been motivated to apply the teaching of Kobayashi to the system of Mosher to provide “fast access to the backup system by address.” Such a technique would be inapplicable to the system disclosed by Mosher, because Mosher simply does not disclose a system wherein an address is used to access a backup system.

Finally, the Office Action contends that applying the teachings of Kobayashi would reduce the searching time for a backup system. This assertion is not only unsupported by Kobayashi, but is directly contradicted by it. Kobayashi teaches that a particular operating

processor is paired selectively with a particular backup processor (col. 5, lines 44-46). Thus, Kobayashi does not disclose or suggest searching for a backup system as suggested in the Office Action. Furthermore, even if Kobayashi did disclose searching for a backup system, such a teaching would be inapplicable to the system of Mosher, which does not require searching for a backup system, but rather teaches the pre-assignment of a dedicated backup system.

For the reasons discussed above, the purported motivation for the combination is unsupported by the cited references. Thus, the combination of Mosher and Kobayashi under 35 U.S.C. §103 is improper, such that the rejection of claims 1, 3-8, 10, 12-15, 17-19, 21-24, 28-29, 31-36, 38-42, 44-45, and 47-51 under 35 U.S.C. §103 as being obvious over this combination is improper and should be withdrawn.

II. The Claims Distinguish Over Any Purported Combination

A. Claims 1 and 3-6

Claim 1 recites a computer system comprising a plurality of backup storage systems including at least first and second backup storage systems to each backup information stored on at least one client; and at least one user interface, coupled to at least the first and second backup storage systems, to receive information related to backup activities of the first and second backup storage systems; wherein the plurality of backup storage systems includes a third backup system to backup information stored on at least one client, the third backup storage system being coupled to the at least one user interface. The computer system further comprises at least one domain that includes at least the first and second backup storage systems and the at least one user interface, the at least one domain excluding the third backup storage system so that the at least one user interface is not authorized to receive information related to backup activities of the third backup storage system.

The Office Action contends that Mosher teaches the limitations of claim 1, with the exception of a domain that includes at least first and second backup storage systems and the at least one user interface, and excludes the third backup storage system. The Office Action also contends that Kobayashi teaches a domain, and that it would have been obvious to one skilled in the art to apply the teachings of Kobayashi to the system of Mosher, for the reasons discussed

above. As stated above, these contentions are unsupported by the asserted references. In addition, the asserted combination does not meet several of the limitations of claim 1.

First, the Office Action contends that Mosher teaches at least one user interface coupled to at least first and second backup storage systems. In paragraph 6, the Office Action refers to element 140 (Figure 2) of Mosher in support of this contention. This reference is misplaced, as Mosher does not disclose or suggest that Monitor Process 140 comprises a user interface. Mosher states that Monitor Process 140 tracks how far a backup process lags behind the local process that writes records to the MAT, so that it can determine how long it might take the RDF system to synchronize the backup database with the primary database if the primary system were to fail (col. 22, lines 29-33). Mosher does not disclose or suggest that Monitor Process 140, or any other component, comprises a user interface coupled to at least first and second backup storage systems.

Second, the Office Action contends that Kobayashi teaches a domain. As mentioned above, an automated search of the disclosure of Kobayashi indicates that the word “domain” is not used once, and it is unclear where the Office Action finds such a teaching. In support of this contention, the Office Action cites a passage (col. 5, lines 40-49) in which Kobayashi merely discloses a plurality of operating processors that are respectively connected to a corresponding plurality of backup processors via a common communication channel, and wherein an operating machine is combined selectively with a particular backup machine by use of their addresses. It is not clear where the domain is believed to be disclosed. However even assuming arguendo that the configuration disclosed by Kobayashi comprises a domain, it would not meet the limitations of claim 1, as the configuration of Kobayashi does not comprise a domain which includes first and second backup storage systems but excludes a third backup storage system, as recited in claim 1.

Finally, the Office Action makes no attempt to explain how the asserted combination discloses a user interface which receives information related to backup activities of first and second backup storage systems, but is not authorized to receive information related to backup activities of a third backup storage system. Thus, the Office Action fails to explain and support the rejection as required by 37 CFR 1.104(c)(2) and MPEP §706.02(j).

For the reasons discussed above, the combination of Mosher and Kobayashi fails to disclose the limitations of claim 1. As a result, claim 1 is not rendered obvious by the asserted combination. Accordingly, the Applicants respectfully request that the rejection of claim 1 (as well as claims 3-6 that depend therefrom) under 35 U.S.C. §103(a) be withdrawn.

B. Claims 7-10

Claim 7 recites a method for use in a computer system including at least first and second backup storage systems to each backup information stored on at least one client, and at least one user interface coupled with the first and second backup storage systems. The method comprises an act of receiving, at the at least one user interface, information related to backup activities of the first and second backup storage systems; wherein the computer system further includes a third backup storage system to backup information stored on at least one client, the third backup storage system being coupled to the at least one user interface. The computer system further includes at least one domain that includes at least the first and second backup storage systems and the at least one user interface and excludes the third backup storage system; and the act of receiving information includes an act of receiving, at the at least one user interface, only information related to backup activities of backup storage systems included in the at least one domain, so that the at least one user interface does not receive information related to backup activities of the third backup storage system.

As should be appreciated from the discussion above relating to claim 1, the prior art of record does not teach or suggest a method of receiving information related to backup activities of first and second backup storage systems included in a domain, but not receiving information relating to a backup storage system outside the domain. Therefore, claim 7 patentably distinguishes over the prior art of record, such that the rejection of claim 7 under 35 U.S.C. §103(a) should be withdrawn.

Claims 8-10 depend from claim 7 and are allowable for at least the same reasons.

C. Claims 12-15

Claim 12 recites a method for use in a computer system including at least one user interface and at least one backup storage system to store backup data from at least one client.

The method comprises an act of receiving information related to backup activities of the at least one backup storage system at the at least one user interface over a path that is not dedicated to transporting information between the at least one backup storage system and the at least one user interface; wherein the at least one backup storage system includes a first backup storage system and second backup storage system. The computer system includes at least one domain that includes at least the first backup storage system and the at least one user interface and excludes the second backup storage system; and the act of receiving information includes an act of receiving, at the at least one user interface, only information related to backup activities of backup storage systems included in the at least one domain, so the at least one user interface does not receive information related to backup activities of the second backup storage system.

As should be appreciated from the discussion above with respect to claim 1, the asserted combination fails to teach a method for use in a system including a user interface and a domain that includes at least a first backup storage system and the user interface and excludes a second backup storage system, and wherein only information related to backup activities of backup storage systems in the domain are received at the user interface, as recited in claim 12.

Accordingly, the Applicants respectfully request that the rejection of claim 12 under 35 U.S.C. §103(a) be withdrawn.

Claims 13-15 depend from claim 12 and are patentable for at least the same reasons.

D. Claim 17-19 and 21

Claim 17 recites a user interface for use in a computer system having at least one backup storage system, the at least one backup storage system to store backup data from at least one client, the user interface comprising at least one controller, to be coupled to the at least one backup storage system, to receive information related to backup activities of the at least one backup storage system over a path that is not dedicated to transporting information between the at least one backup storage system and the user interface; wherein the at least one backup storage system includes a first backup storage system and a second backup storage system. The computer system includes at least one domain that includes at least the first backup storage system and the user interface and excludes the second backup storage system; and the controller receives only information related to backup activities of backup storage systems included in the

at least one domain, so that the user interface does not receive information related to backup activities of the second backup storage system.

As should be appreciated from the foregoing, the prior art of record does not teach a user interface comprising at least one controller that receives only information related to backup activities of backup storage systems included in a domain. Therefore, claim 17 patentably distinguishes over the prior art of record, such that the rejection of claim 17 under 35 U.S.C. §103(a) should be withdrawn.

Claims 18, 19 and 21 depend from claim 17 and are allowable for at least the same reasons.

E. Claims 22-24

Claim 22 is directed to a computer readable medium encoded with a program which, when executed on a computer system, performs a method substantially similar to the method recited in claim 12. Therefore, for the reasons set forth above with respect to claim 12, claim 22 patentably distinguishes over the prior art of record, such that the rejection of claim 22 under 35 U.S.C. §103(a) should be withdrawn.

Claims 23 and 24 depend from claim 22 and are allowable for at least the same reasons.

F. Claims 40-42

Claim 40 recites a method for use in a computer system having at least one user interface and at least one backup storage system to store backup data from at least one client. The method comprises an act of transmitting information related to backup activities of the at least one backup storage system to the at least one user interface over a path that is not dedicated to transporting information between the at least one backup system and the at least one user interface; wherein the at least one backup storage system includes a first backup storage system and a second backup storage system, wherein the computer system includes at least one domain that includes at least the first backup storage system and the at least one user interface and excludes the second backup storage system; and wherein the act of transmitting information includes an act of transmitting the information related to the backup activities of the first backup storage system within the at least one domain, so that the information related to the backup

activities of the first backup storage system is not transmitted to the second backup storage system.

As should be appreciated from the foregoing, the prior art of record does not teach or suggest a method of transmitting information in a computer system including at least one domain that includes a first backup storage system and a user interface but excludes a second backup storage system, the method including an act of transmitting information from the first backup storage system within the domain to the user interface. Therefore, claim 40 patentably distinguishes over the prior art of record, such that the rejection of claim 40 under 35 U.S.C. §103(a) should be withdrawn.

Claims 41 and 42 depend from claim 40 and are allowable for at least the same reasons.

G. Claims 44-45, 47 and 48

Claim 44 recites a first backup storage system to store backup data from at least one client, the first backup storage system for use in a computer system having at least one user interface. The first backup storage system comprises: at least one controller to transmit information related to backup activities of the first backup storage system to the at least one user interface over a path that is not dedicated to transporting information between the first backup storage system and the at least one user interface; wherein the computer system includes a second backup storage system, and at least one domain that includes the first backup storage system and the at least one user interface and excludes the second backup storage system; and wherein the at least one controller transmits the information related to the backup activities of the first backup storage system only within the at least one domain, so that the at least one controller does not transmit the information related to the backup activities of the first backup storage system to the second backup storage system.

As should be appreciated from the foregoing, the prior art of record does not teach or suggest a first backup storage system comprising at least one controller that transmits information relating to the backup activities of the first backup storage system only within a domain. Thus, claim 44 patentably distinguishes over the prior art of record, such that the rejection of claim 44 under 35 U.S.C. §103(a) should be withdrawn.

Claims 45, 47 and 48 depend from claim 44 and are allowable for at least the same reasons.

H. Claims 49-51

Claim 49 is directed to a computer readable medium encoded with a program which, when executed on a computer system, performs a method substantially similar to the method recited by claim 40. Therefore, for the reasons set forth above with respect to claim 40, claim 49 patentably distinguishes over the prior art of record, such that the rejection of claim 49 under 35 U.S.C. §103(a) should be withdrawn.

Claims 50 and 51 depend from claim 49 and are allowable for the same reasons.

Allowed Subject Matter

The Applicants note with appreciation the Examiner's indication that claim 11 is allowed.

CONCLUSION

In view of the foregoing remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this response, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the telephone number listed below to discuss any outstanding issues relating to the allowability of the application.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, the Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,
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